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ICAO Asia/Pacific Wildlife Hazard Management Workshop
and Seventh Meeting of the Asia/Pacific Wildlife Hazard
Management Working Group (AP-WHM/WG/7)

Pokhara, Nepal, 5 to 9 May 2025

**Agenda Item 3: Global, Regional and National Guidance/Best Practices on
Wildlife Hazard Management**

**EXPERIENCE OF PAKISTAN AIRPORTS AUTHORITY WITH TECHNOLOGY IN
WILDLIFE HAZARD MANAGEMENT**

(Presented by Pakistan)

SUMMARY

This paper details the steps taken by Pakistan Airports Authority to explore the application of emerging technologies in support of effective wildlife hazard management.

1. INTRODUCTION

1.1 As airports face growing challenges from wildlife activity in and around airfields, the aviation industry is increasingly turning to emerging technologies to strengthen wildlife hazard management (WHM). Innovations such as avian radar, automated detection systems, acoustic deterrents, and thermal imaging offer new tools for early warning and rapid response. However, the effectiveness of these technologies can vary considerably depending on local environmental conditions, geographical settings, and the behavior of target species.

1.2 Pakistan Airports Authority (PAA) has been exploring the integration of technological solutions into wildlife hazard management at its airports. This paper gives a brief overview of the initiatives of PAA in incorporating technology in its WHM practices at airports.

2. DISCUSSION

2.1 The key areas of wildlife hazard management requiring technological intervention as identified by PAA include:

- Maintenance and analysis of wildlife strike records
- Wildlife detection
- Wildlife behaviour analysis
- Wildlife deterrence

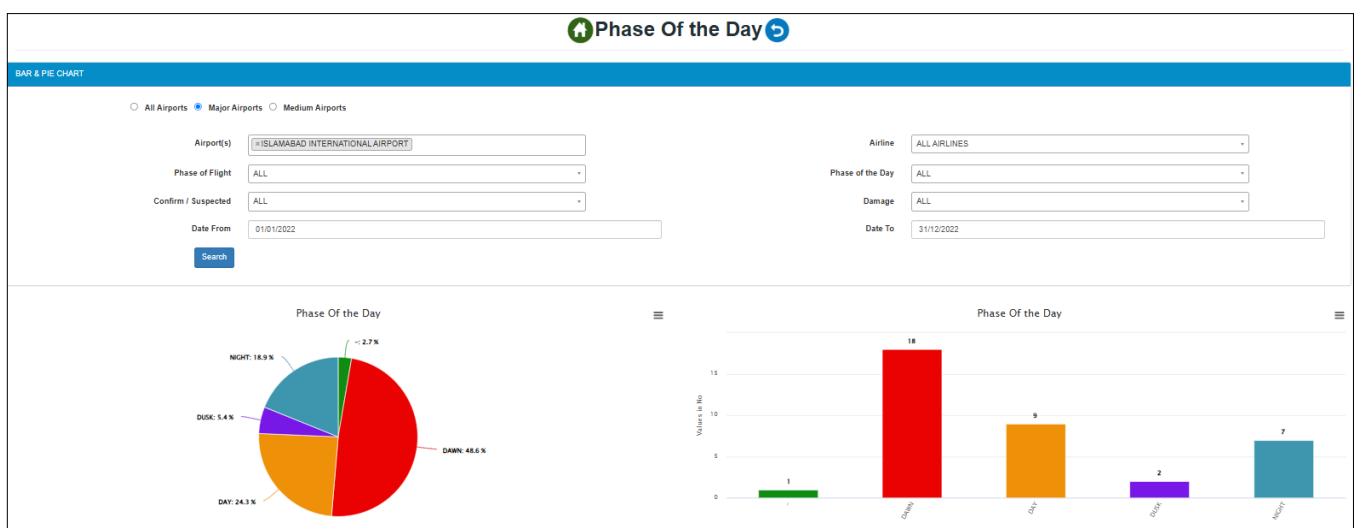
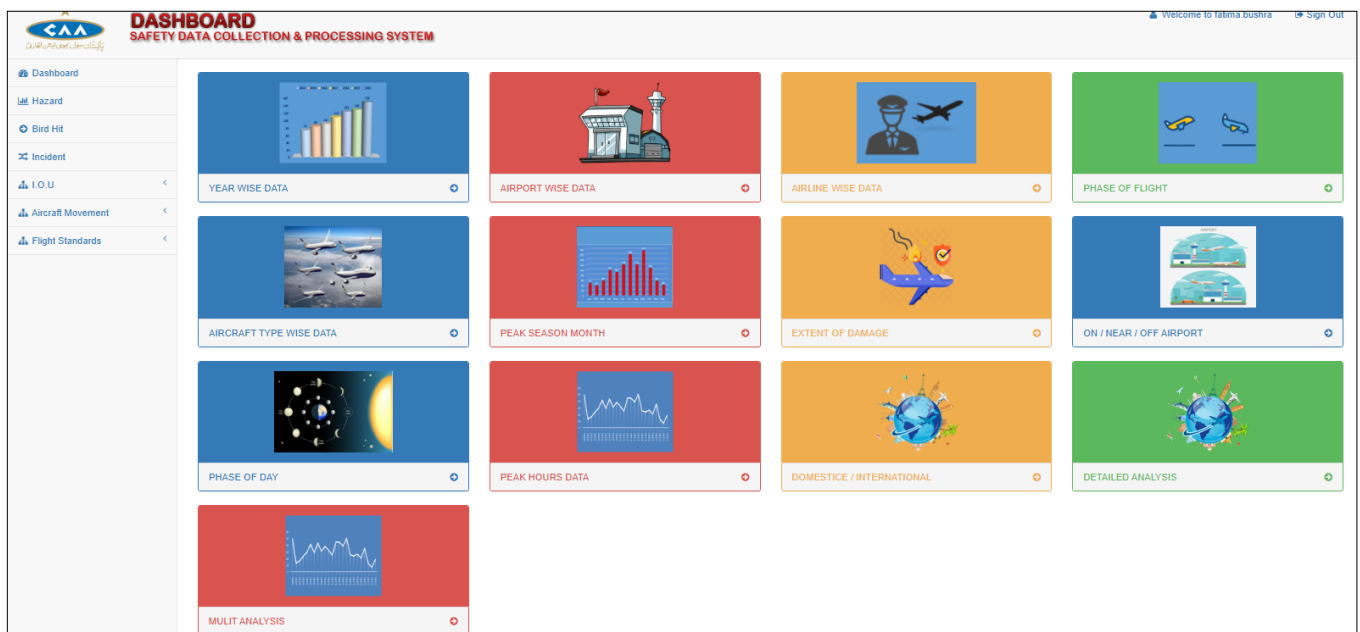
Strike record data maintenance and analysis

2.2 Pakistan utilizes a locally developed software system, the **Safety Data Collection and Processing System (SDCPS)**, to collect and analyze safety-related data, including wildlife strikes and safety hazards pertaining to wildlife activity. The system provides real-time access and analytical tools to both PAA and the Pakistan Civil Aviation Authority (PCAA).

2.3 Key features of SDCPS include:

- A dynamic dashboard for customizable data analysis
- A dedicated airline input portal for bird strike reporting
- Verification and classification of strikes by Airside Managers as per PCAA criteria

2.4 The SDCPS Dashboard allows users to analyze data against numerous factors and customizable criteria.



2.5 The system features a separate input portal for airlines to record bird strikes. The strike reports can then be viewed by Airport Airside Manager, verified and also categorized based on the bird strike evidence as per criteria specified by PCAA regarding suspected and confirmed bird strikes.

PAKISTAN CIVIL AVIATION AUTHORITY
BIRD / ANIMAL STRIKE REPORTING PORTAL
CAAF-067-MSXX-2.0

Airport: KARACHI
From Date: 21-Apr-2024 To Date: 21-Apr-2025 Operator: ALL
Show Data Print

Show Total Records: 86
Show 10 entries

AIRLINE PART								CAA PART							
ID	Action	Date	AirportName	OperatorName	FlightNo	Birdhit Status Reported	View	ReportedBy	Verified by Airside Inspector	Final Authority	Verified By Name	Status After Verification	Sector	Print	User name
755	Edit	13-Apr-2023	KARACHI	FLY JINNAH SERVICES (PVT) LIMITED	FJ647D	CONFIRMED	No Attachment	right.p	VERIFIED	VERIFIED	managers@caa.gov.pk	CONFIRMED	DOMESTIC	Print	right.p / SCMS Admin
7542	Edit	02-Apr-2023	KARACHI	FLY JINNAH SERVICES (PVT) LIMITED	SP443	CONFIRMED	View	Air Raz	VERIFIED	VERIFIED	managers@caa.gov.pk	CONFIRMED	DOMESTIC	Print	Air Raz / Airline
7543	Edit	26-Mar-2023	KARACHI	PAKISTAN INTERNATIONAL AIRLINES CORP	PI001	CONFIRMED	No Attachment	right.p	VERIFIED	VERIFIED	managers@caa.gov.pk	CONFIRMED	DOMESTIC	Print	right.p / SCMS Admin
7545	Edit	27-Mar-2023	KARACHI	FLY JINNAH SERVICES (PVT) LIMITED	SP485	CONFIRMED	View	Air Raz	VERIFIED	VERIFIED	managers@caa.gov.pk	CONFIRMED	DOMESTIC	Print	Air Raz / Airline
7539	Edit	25-Mar-2023	KARACHI	SENE AIR (PVT) LIMITED	SR121	SUSPECTED	View	gnrc	VERIFIED	VERIFIED	managers@caa.gov.pk	CONFIRMED	DOMESTIC	Print	gnrc / Airline
7533	Edit	18-Mar-2023	KARACHI	FLY JINNAH SERVICES (PVT) LIMITED	SP443	CONFIRMED	View	Air Raz	VERIFIED	VERIFIED	managers@caa.gov.pk	SUSPECTED	DOMESTIC	Print	Air Raz / Airline
7535	Edit	08-Mar-2023	KARACHI	PAKISTAN INTERNATIONAL AIRLINES CORP	PI002	CONFIRMED	View	1.Air	VERIFIED	VERIFIED	managers@caa.gov.pk	CONFIRMED	INTERNATIONAL Inbound	Print	1.Air / Airline
7536	Edit	07-Mar-2023	KARACHI	FLY DUBAI	DOBXX	CONFIRMED	No Attachment	right.p	VERIFIED	VERIFIED	managers@caa.gov.pk	CONFIRMED	INTERNATIONAL Inbound	Print	right.p / SCMS Admin
7528	Edit	28-Feb-2023	KARACHI	FLY JINNAH SERVICES (PVT) LIMITED	SP474	CONFIRMED	View	Air Raz	VERIFIED	VERIFIED	managers@caa.gov.pk	SUSPECTED	DOMESTIC	Print	Air Raz / Airline
7527	Edit	26-Feb-2023	KARACHI	FLY JINNAH SERVICES (PVT) LIMITED	SP485	CONFIRMED	View	Air Raz	VERIFIED	VERIFIED	managers@caa.gov.pk	CONFIRMED	DOMESTIC	Print	Air Raz / Airline

Showing 1 to 10 of 86 entries

2.6 One of the challenges in complete implementation of SDCPS is the non-reporting of strikes on the online system, especially by foreign carriers.

2.7 Furthermore, continuous effort is being made to further improve this software and integrate it with other systems in the industry.

Procurement of Advanced Wildlife Hazard Management Equipment

2.8 PAA is in the process of procuring for its major airports, a comprehensive and advanced system for management of wildlife hazard at the airports. The process has been prolonged due to concerns of suitability of specific technology in the specific setting of each airport in Pakistan and its effectiveness in deterring the problematic species. Given that the procurement of such advanced equipment involves a significant investment, these concerns required to be addressed.

2.9 To ensure a successful acquisition, PAA has adopted the following approach:

- Limiting the plan to one airport in the first stage, i.e. Allama Iqbal International Airport
- Requiring a complete wildlife hazard management system consisting of an intelligent detection system as well as deterrence mechanism made up of at least two different methods (laser & acoustic), rather than a single equipment.
- Proven effectiveness of the system against the target species or species from the same grouping / family.
- Including installation of the equipment and satisfactory operation of the equipment at an airport comparable with Allama Iqbal International Airport as a mandatory requirement for technical qualification.
- Dividing the technical evaluation into two stages, document based technical evaluation and demonstration-based technical evaluation (of companies qualifying document-based technical evaluation).

2.10 The installation of an advanced wildlife hazard management system at AllAP Lahore will mark the first step of PAA in utilizing modern equipment to supplement wildlife hazard management activities at its airports.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss any relevant matters as appropriate.

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